

6. PUBLIC INVOLVEMENT

6.1 SCOPING AND DRAFT EIS.

A scoping letter and Notice of Intent (NOI) to prepare the Draft Environmental Impact Statement was published in the Federal Register on October 29, 1999. In addition, the NOI was mailed to interested and affected parties by letter dated September 30, 1999. A copy of the letter and NOI are included in Appendix C.

6.2 AGENCY COORDINATION.

Coordination with relevant Federal, State, and local agencies is being conducted by Broward County. Copies of relevant correspondence are included in Appendix C. The DEIS and/or Notice of Availability was circulated to Federal, State, and local agencies including the public and special interest groups. Recipients are listed in Section 6.3.

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6.4 COMMENTS RECEIVED AND RESPONSE

The DEIS and/or Notice of Availability was circulated to Federal, State, and local agencies, interest groups, and individuals for review and comment. The correspondence section of this document includes copies of comments by various federal, state, interest groups, and individuals (Appendix C). Letters of comment on the Draft EIS were received from the National Marine Fisheries Service (NMFS), United States Department of the Interior, United States Environmental Protection Agency (EPA), Florida Fish & Wildlife Conservation Commission (FWCC), Broward Soil and Water Conservation District, South Florida Regional Planning Council, Reefkeeper International, Save Our Shoreline, Inc., Environmental Defense, Sierra Club-Miami Group, Global Coral Reef Alliance, Greater Fort Lauderdale Dive Association, Public Employees for Environmental Responsibility (PEER), Cry of the Water, as well as from several individuals, including a petition circulated by Cry of the Water containing approximately 500 signatures. The cities of Hollywood and Fort Lauderdale, the Hollywood Beach Business Association, and the Westin Diplomat Resort and Spa submitted letters in support of the proposed project. Approximately 350 individuals submitted letters in support of implementation of the Fort Lauderdale segment (Segment II) of the proposed project, including a petition of 25 signatures, and approximately 100 residents of Hollywood submitted a petition in support of the Hollywood section of the project (Segment III). Pertinent comments with responses are listed below.

6.4.1 Federal Agency Comments

6.4.1.1 U.S. Department of the Interior letter dated May 9, 2002

Comment: The full scope of biological monitoring should be incorporated into one section for ease of review.

Response: Section 4.34 Environmental Commitments of the EIS has been revised to include all aspects of the proposed monitoring in one section, and all monitoring plan details are now provided in the EIS appendices.

Comment: All components of the biological monitoring program outlined in the Fish and Wildlife Coordination Act Report and Biological Opinion should be addressed and incorporated into one section.

Response: Development of the biological monitoring program has been coordinated with the U. S. Fish and Wildlife Service. The monitoring program outlined in the Coordination Act Report and Biological Opinion has been incorporated into the proposed biological monitoring program with minor modifications as agreed to by the U. S. Fish and Wildlife Service during agency review of the DEIS and the federal / state permit application process. Section 4.34 Environmental Commitments of the EIS has been revised to include all aspects of the proposed monitoring in one section and all monitoring plan details are now provided in the EIS appendices.

6.4.1.2 National Marine Fisheries Service (NMFS) letter dated June 3, 2002. Note: Broward County's responses to the June 3, 2002 NMFS comments were submitted to the USACE on October 17, 2002.

Comment: In a letter a letter dated June 26, 2000 which contains comments on the Public Notice for the Department of the Army Permit Application, NMFS recommended that surveys be conducted of the proposed borrow sites and of the adjacent reef resources. NMFS also recommended that a 500-foot buffer zone be maintained between the borrow areas and adjacent reef; that borrow area boundaries be straightened; that plans should be developed which avoided or minimized the potential for damage to benthic habitats from mechanical operations, siltation, turbidity, and burial by sediment; and that a plan be developed and implemented to fully compensate for unavoidable impacts to hardbottom, coral, and other sensitive habitats.

Response: The NMFS letter dated June 3, 2002 acknowledged the County's efforts to avoid and minimize impacts to EFH and other NMFS-trust resources. Detailed and comprehensive surveys were conducted of the interior of the borrow sites and of the reef resources adjacent to the reefs, leading to elimination of two borrow sites and modifications to four others. These modifications resulted in maximizing the buffers between the borrow areas and adjacent reefs, and in providing assurance to NMFS

that the most sensitive resources would be protected by the largest buffers. As noted in the June 3, 2002 NMFS letter, "Generally, the hardbottom communities located seaward of the borrow areas (i.e. eastern boundaries) contain higher relief structure and higher percentage of hard and soft coral than the hardbottom communities located landward of the borrow areas. The average buffer distance to the western boundaries of the five proposed borrow areas are: 357 feet for Borrow Area 1; 285 feet for Borrow Area 2; 375 feet for Borrow Area 3; 361 feet for Borrow Area 4; and 235 feet for Borrow Area 6. The average buffer distance for the eastern boundaries of the five proposed borrow areas are: 513 feet for Borrow Area 1; 718 feet for Borrow Area 2; 671 feet for Borrow Area 3; 512 feet for Borrow Area 4; and 680 feet for Borrow Area 6." In the letter, NMFS did not object to the proposed buffers.

Comment: In the June 3, 2002 letter, NMFS expressed concerns over the monitoring plans proposed for the offshore and nearshore resources. It was noted that in order to protect the resources adjacent to the borrow areas and the beach fill areas, monitoring should be as close to "real-time" as possible, with daily visits to reefs around borrow areas that are being utilized. Also, NMFS recommended that physiological stress indicators be noted in addition to the sedimentation measurements that were proposed and that triggers be incorporated to halt or modify the dredging and beach fill placement if certain thresholds are exceeded. Further, it was recommended that nearshore hardbottom edge mapping be conducted at intervals adequate to determine the actual extent of migration of the toe of fill.

Response: NMFS noted in the letter that consultations with the agency would be welcome in addressing these concerns and in developing acceptable monitoring plans. The County took advantage of this offer and conducted numerous joint agency meetings and conference calls, included appropriate State agencies as well as NMFS, the USACE, the Fish and Wildlife Service, and EPA. These consultations have resulted in the production of an offshore construction and monitoring plan which incorporates the elements recommended by the agencies: i.e. a dredging plan which rotates use of the borrow sites, reducing pressure on the nearby resources; seven-day-per-week monitoring of numerous stations around the borrow sites, in sequences consistent with the dredging plan; and inclusion of sedimentation accumulation measurements, biological stress observations, and tissue examinations of certain hard coral species if levels of sedimentation stress warrants. In addition, triggers are incorporated that halt dredging in applicable borrow areas if sedimentation

and/or stress levels reach specified thresholds. Nearshore hardbottom monitoring protocols have also been developed and refined to address concerns of NMFS and the other agencies. The plan now includes baseline establishment of additional monitoring stations, during-construction, and post-construction examination of sediment accumulation and stress indicators on the nearshore hardbottom communities, and triggers which halt and/or modify filling operations if specified thresholds are exceeded. Additionally, hardbottom edge mapping will now be carried out consistent with agency wishes.

Comment: The proposed mitigation plan was also a source of concern for NMFS. The agency's June 3, 2002 letter recommended incorporation of an analysis of temporal losses in habitat value by application of the Habitat Equivalency Analysis (HEA) and that corals of significant size should be relocated from the impact areas to the mitigation substrate.

Response: In consultation with NMFS and the other agencies, the mitigation plan was modified and refined. HEA was run for various scenarios, and the transplanting of between 1,000 and 2,000 corals of a size 15 cm or greater from the impact area to the mitigation will now be accomplished. Application of the HEA and inclusion of coral transplanting resulted in a calculated quantity of mitigation which slightly exceeds the predicted acreage of impacts to hardbottom, an outcome which now satisfies state regulatory, and federal resource protection agencies, including NMFS.

Comment: The NMFS letter of June 3, 2002 reflected dissatisfaction with the Cumulative Impacts section of the DEIS. The letter recommended that additional beach nourishment projects be incorporated in the analysis to better assess all potential and known significant impacts. The agency noted that a more thorough examination of the impacts on the nearshore hardbottom habitats, offshore reefs, fishery resources, and macro-invertebrate communities from previous projects in the area is needed, and also recommended that a Programmatic Environmental Impact Statement should be prepared for the east coast of Florida.

Response: The Cumulative Impact Assessment section of the DEIS is being supplemented by inclusion of additional projects in the analysis. The FEIS includes a broader look at the impacts from past projects on nearshore and offshore hardbottom and reefs and on the benthic invertebrate habitats. The analysis will also provide more details regarding the suitability of the proposed mitigation as compensation for impacts to fish habitats.

Preparation of a Programmatic Environmental Impact Statement for the east coast of Florida is beyond the purview of Broward County; however, we understand that a Regional Environmental Impact Statement for beach nourishment activities in several southeastern Florida counties is being implemented by the USACE. It is expected that data and analyses from Broward County's EIS will be of value to that effort, and the County will be happy to assist in any way possible.

Comment: NMFS has pointed out that Broward County's economic analysis of the benefits and costs of the project does not incorporate data generated by a recent multi-agency study on the socioeconomic value of regional reef resources. NMFS speculates that consideration of the loss of use of nearshore hardbottom habitat until the mitigation achieves full value may result in significant economic losses, influencing the benefit/cost ratio which is used to justify the project.

Response: In the General Reevaluation Report (GRR) for the project, National Economic Development benefits of various project alternatives are examined. The selected alternative is the one which maximizes the NED benefits relative to project costs in accordance with USACE Principles and Guidelines. In general, primary benefits are those associated with storm damage reduction to upland properties, and costs are calculated based on expenses related to project design, engineering, monitoring, and construction. Secondary benefits in the form of certain recreational inputs may be considered but the project must initially be justified (net benefits exceed costs) based on primary benefits only. The USACE Principles and Guidelines do not ordinarily consider loss of use of natural resources as project costs. In any event, the GRR for the project was completed by the County prior to completion of the socioeconomic study of the reef resources. Notwithstanding the foregoing, the County has requested that the lead economists in the preparation of the socioeconomic study prepare an analysis of the costs of temporary loss of nearshore hardbottom due to the beach project, and to apply the results to the benefit/cost calculations. The final report (Bell & Leeworthy, 2003) indicates that the benefit/cost ratio of the project is not significantly affected by consideration of the impacts of the project to the nearshore hardbottom. In fact, according to the authors of the White Paper, the modified benefit/cost ratio is not less than 5 to 1. The results of the White Paper (Bell & Leeworthy, 2003) are included in the FEIS.

Comment: NMFS expresses concern over the small amount of worm reef that will be impacted by the project, and wonders if the mitigation will offset the loss of this habitat.

Response: The project proposes to cover 1.1 acres of wormrock which is located extremely close to shore in a particular location in Segment III. It is noted that the area in which the wormrock exists has been the recipient of two prior beach nourishment projects in the past and that the wormrock has colonized scattered pieces of limestone rock over the last several years. County biological investigations associated with the proposed project have documented that this particular wormrock is deteriorating over time, and may not persist until project construction. In any event, in Broward County wormrock frequently colonizes exposed hard substrate in shallow water, including pilings, seawalls, and even the odd concrete block or large rock. There is every reason to believe that wormrock will colonize significant areas of the proposed mitigation.

Comment: NMFS recommends that surveys of the areas impacted by the submerged sand delivery pipelines be surveyed both before deployment and after removal.

Response: Concur. Survey of the pipeline corridors has been completed and the County will be on-site to provide exact routing of each pipeline deployment within the corridors to minimize the impacts of the pipeline to the resources. The entire length of the pipeline will be visually inspected regularly during use and after removal, a detailed survey will be conducted to precisely document impacts.

Comment: NMFS concludes in the June 3, 2002 letter that the EFH section of the DEIS does not adequately address potential effects of this and other projects in southeast Florida. Reference is made to the Cumulative Impact comments provided earlier in the letter.

Response: The EFH Assessment in the FEIS includes consideration of all additional data gathered in response to the NMFS comments and will incorporate the modified monitoring and mitigation plans, construction and operations plans, and updated cumulative impact analysis

Comment: NMFS concludes that the DEIS does not adequately address adverse impacts of the project, a conclusion that is based on the then-inadequacy of the monitoring plans, the mitigation plan, and the cumulative effects assessment. In the June 3, 2002 letter, the NMFS continues to recommend against issuance of a Department of the Army Permit and retained the option to elevate the matter pursuant to Part IV, paragraph 3(a) and 3(b) of their Clean Water Act 04(g) Memorandum of Agreement.

Response: All issues of concern expressed in the NMFS letter have been addressed and the NMFS has agreed in a letter dated May 28, 2003 not to elevate the matter and to withdraw its objections to issuance of the Department of the Army Permit.

6.4.1.3 U. S. Environmental Protection Agency letter dated May 22, 2002

Comment: The final document should outline the consequences (societal/economic) to development/recreational interests when all practicable sources of sand within Segments II and III have been expended.

Response: Sufficient alternative sand sources are available to maintain the project into the future. The identification and use of alternate sand sources and the societal/economic affect those sources will have on development/recreational interests can not be comprehensively evaluated until specific sources have been delineated and investigations conducted that evaluate the consequences of using one or more alternative sand sources in Broward County.

Comment: It was noted (pages 17 – 20, EIS) that the project is planned for construction in 2002, with renourishment necessary every 6 years. The renourishment schedule for Segment III assumes that a sand bypass facility at Port Everglades would be available by 2008. There needs to be more information in the final document that this facility will be on-line at/before that time. The recommended plan for Segment II does not provide enough information to determine future sand resources for the project. The final EIS needs to address this matter in more detail and incorporate the operation of sand bypassing stations at all Broward County inlets into an overall management plan. As the matter now stands, this proposal only provides a short-term solution to the erosion being experienced along the Broward County shoreline. This was highlighted by EPA staff in discussions with the applicant, i.e. it was emphasized that acceptable offshore borrow areas in Broward County are limited.

Response: Broward County is currently evaluating the feasibility of sand bypassing at Port Everglades as a separate project which will be proposed for implementation as an independent project. Sand bypassing was evaluated during development of the Federal design document for the shore protection project as an alternative sand source for nourishment of beaches south of the Port, but was not selected as a federally authorized component of the shore protection project. As noted in the EPA's introductory letter, the quantity of material available from inlet sources is insufficient to address the long-term needs of the project and alternative sources of sand will be investigated as

the USACE and local sponsor move forward with future project development and planning.

Comment: Buffer zones will range from 200 – 400+ feet from the hardbottom communities (page 36, EIS). In order to protect hardbottom reefs, EPA requests a minimum 400-foot buffer be established around all borrow areas.

Response: Refer to Section 6.4.1.2.

Comment: The hardbottom impacts (page 144, EIS) resulting from pipeline placement have been estimated at 90 square feet per corridor. Mitigation for pipeline impacts should be addressed and incorporated into the project's mitigation plan. The pipelines will be surveyed weekly during operation to check for sand leakage. As a result of our experience with similar projects in south Florida, we urge that this monitoring be conducted daily.

Response: Survey of the pipeline corridors has been completed and the County will be on-site to provide exact routing of each pipeline deployment within the corridors to minimize the impacts of the pipeline to the resources. The entire length of the pipeline will be visually inspected regularly during use, and after removal, a detailed survey will be conducted to precisely document impacts. The Federal and state resource agencies have accepted Broward County's proposal to provide mitigation for documented pipeline impacts after project construction.

Comment: In our comments to the April 26, 2000 public notice for permit application number 199905545, we made a number of observations about the rock and shell (greater than 1 inch diameter) which will be dredged from the borrow areas and disposed at two artificial reef areas. Disposal of dredged material in the ocean requires a permit pursuant to the Marine Protection Research and Sanctuaries Act of 1972 and its implementing regulations (40 CFR part 225) and must be evaluated by the Corps of Engineers and EPA in accordance with Criteria set for in 40 CFR part 227. Additionally, selection of appropriate disposal areas must be conducted in accordance with 40 CFR part 228. Although the regulations do not require a permit for the placement of materials for developing fisheries resources, the subject material does not appear to meet the pertinent criteria because of its size (1 inch). "Guidelines for Marine Artificial Reef Materials" (Gulf States Marine Fisheries Commission, 1997), cite that "shell is small, light weight material and consequently would have a tendency to be silted over in moderate to high

energy situations...it is doubtful that shell would be of any value in offshore areas because the deeper water and currents would tend to scatter the shell over a wide area, offering little relief or continuous hard bottom habitat.”

Response: The material to be disposed of in the rock disposal areas is generally much greater than one inch in size as stated by EPA. Broward County borrow sites have varying amounts of rubble material that will be separated during the dredging operation before the sand is transferred to the fill sites. During previous projects, Broward County has effectively utilized this technique to provide deepwater habitat within their artificial reef easements. Investigations of the sites previously used by the County for rock and rubble disposal indicate that these areas have become productive marine habitats as a result of the material placement. Additional coordination on the use of the selected rock disposal sites has not been identified by the USACE as a requirement for project implementation.

6.4.2 State and Local Agency Comments

6.4.2.1 Florida Fish and Wildlife Conservation Commission letter dated June 28, 2002.

Comment: The Draft Environmental Impact Statement does not consider the impact of the project on juvenile green turtles that utilize nearshore hard bottom habitats for foraging. As the only primarily herbivorous sea turtle species, the distribution and abundance of green turtles is tied to the occurrence of their food, marine plants. Loss of this important foraging area, and the attached plant species, could have significant negative impacts to the juvenile green turtle populations that occur here.

Response: Concur. The FEIS has been revised to assess the impacts of the project on juvenile green sea turtles. Broward County has developed an extensive macroalgal mitigation monitoring program that includes an assessment of algal recruitment with an emphasis upon replacement of preferred algal food species for sea turtles. Monitoring stations will be established over segments of the mitigative artificial reef site located in closest proximity to FDEP control monument R-66 in Fort Lauderdale (Segment II) in recognition that this area is closest to the natural nearshore hardbottom where the highest number of juvenile green sea turtle sightings occurred in the summer of 2001. Monitoring stations will also be established in Segment III to evaluate specific macroalgae species abundance on a semi-annual basis (spring/summer and fall/winter) for a period of 4 years in compliance with the FDEP permit. Broward County has agreed that if target algal coverage is not achieved after one year of

monitoring, transplantation of select algal species from the equilibrium toe of fill impact areas between R-52 and R-72 to the artificial reef test site will be performed to achieve the target abundance. If transplantation of select algal species is required, the transplanted algae will be monitored semi-annually in conjunction with the macroalgae recruitment assessment during the 4 year post-construction period. The Fish and Wildlife Conservation Commission has accepted the County's program, and withdrawn their objections to the project. A detailed description of the macroalgae monitoring program has been included in the EIS appendices.

6.4.2.2 Florida Fish and Wildlife Conservation Commission letter dated August 27, 2002.

Comment: The Commission provided specific macroalgae and sea turtle monitoring methods, timing, and data analysis recommendations that could be used when evaluating the effectiveness of the mitigative artificial reefs in providing replacement habitat.

Response: Refer to Section 6.4.2.1.

6.4.2.3 Broward Soil and Water Conservation District letter dated May 20, 2002.

Comment: Sand dunes and vegetation need to be included in the project to: prevent or reduce erosion; retain sand in the beach dune system; provide storm surge protection; restore wildlife habitats; and reduce infrastructure maintenance costs associated with blowing sand from the beach.

Response: The Broward County project was authorized as a shore protection project and not a hurricane protection project which customarily includes dune features as part of the design. Therefore, the proposed project does not include the incorporation of dune features into the federally authorized project. Broward County is coordinating with the FDEP to include the requirement for development of a beach vegetation implementation program for the Segment III shorelines. The County will coordinate with representatives from John U. Lloyd Beach State Park, Dania Beach, Hollywood, and Hallandale Beach to identify areas where beach vegetation is needed and installation is feasible.

6.4.2.4 South Florida Regional Planning Council letter dated May 21, 2002

Comment: Sand movement and downdrift erosion should be monitored on a region wide basis to ensure the livelihood of wildlife habitats and the stability of renourished areas. All actions should be consistent with the goals and policies of the Broward County comprehensive plan and the comprehensive plans of the local municipalities.

Response: Broward County has participated in a regional shoreline monitoring program for a number of years, and an extensive environmental monitoring program has been developed to evaluate project performance. The shore protection project as proposed is consistent with goals and policies of the Broward County and local government comprehensive land use plans. Furthermore, the Florida Department of Community Affairs has determined that the project is consistent with the Florida Coastal Management Program.

Comment: If the proposed actions are implemented, 1) impacts to the natural systems be minimized to the greatest extent feasible and 2) the permit grantor determine the extent of sensitive marine life and vegetative communities in the vicinity of the project and require protection and or mitigation of disturbed habitat. These guidelines will assist in reducing the cumulative impacts to native plants and animals, wetlands and deep water habitat and fisheries that the goals and policies of the Strategic Regional Policy Plan for South Florida seek to protect.

Response: The authorized Federal project has been designed to avoid and minimize natural system impacts to the greatest extent possible. During development of the EIS, a thorough mapping, characterization, and evaluation effort of the project site and adjacent areas was undertaken to ascertain the extent of sensitive coastal habitats. The results of these studies have been incorporated into the EIS.

6.4.2.5 Florida Department of Environmental Protection letter dated September 4, 2002

Comment: Based on the changes to the monitoring and mitigation plans, the FWC has agreed to withdraw its inconsistency determination. The FWC will provide DEP with the working of a recommended sea turtle permit condition that reflects the consensus reached on the issues of concern. The draft EIS should be modified to incorporate the changes in project plans resulting from the state permit negotiations. Although the state has not objections to the project at this time, a federal consistency

determination under the Florida Coastal Management Program cannot be finalized until the permit process is complete. Final agency action on the Joint Coastal Permit application will constitute the State of Florida final consistency decision.

Response: Refer to Section 6.4.2.1.

6.4.2.6 City of Deerfield Beach letter dated May 14, 2002

Comment: The City of Deerfield Beach requests that the USACE withhold further action on the project until a wave impact study can be completed on proposed Borrow Area 1.

Response: On September 17, 2002, Colonel James G. May of the USACE stated that his office would require incorporation of the City's letter in the EIS document. On September 17, 2002, Broward County provided the results of their review of the wave impact study performed on Borrow Area 1 and the adjacent shorelines. In order to address concerns over increased rates of shoreline recession resulting from the use of Borrow Area 1, Broward County has agreed to implement a comprehensive shoreline response monitoring program within the City limits of Deerfield Beach.

6.4.2.7 City of Deerfield Beach letter dated July 23, 2002

Comment: Requisite wave action study for Borrow Area 1 has not been completed.

Response: Refer to Section 6.4.2.5.

Comment: The City of Deerfield Beach should be provided an opportunity to comment on the General Reevaluation Report (GRR) and the Draft Environmental Impact Statement. The City requested that copies of the documents are provided and they be allowed to comment; and that a public hearing be held in the Deerfield Beach or Hillsboro Beach area to solicit comments on the two documents.

Response: On September 17, 2002, Colonel James G. May of the USACE stated that according to USACE and Broward County records the City of Deerfield Beach received three electronic copies of the two documents. Colonel May indicated that he has asked Broward County to forward two additional copies of the documents to the USACE so they can be forwarded to the City. Regarding the issue of an holding another public meeting, Colonel May indicated that an additional meeting was not

deemed necessary because adequate public notice was provided in local papers and through personal communication with City Commissioners in advance of the April 30, 2002 meeting.

Comment: Mitigation efforts and proposals developed prior to completion of the EIS may prejudice the EIS and NEPA process.

Response: The mitigation proposal developed by Broward County was prepared in response to Federal and state resource protection agency requests. A component of the Federal project development and evaluation process is to identify measures which allow for the avoidance or minimization of impacts to sensitive marine habitats. The Broward County Shore Protection Project has been modified to avoid sensitive marine habitats to the greatest extent practicable. For those impacts that can't be avoided, the Federal evaluation process mandates that a plan must be developed and analyzed to demonstrate the feasibility of mitigation efforts. Federal and state review of the complete project proposal can only be conducted if the design, impacts, and mitigation are evaluated in their entirety. The project design, mitigation, and monitoring described in the EIS have received approval from all Federal and state agencies. At no point during development of the EIS, have the Federal agencies responsible for resource protection stated that the process has been compromised by the formulation of the mitigation, or other required project components.

6.4.3 Interest Groups

Many of the comments provided by the National Marine Fisheries Service (NMFS) and other Federal and state agencies and are consistent with the concerns expressed by interest groups and individuals. In instances where a common concern has been expressed, the paragraph will refer back to the Corps responses to comments by an agency in Section 6.4.1. and Section 6.4.2. Concerns which are unique to the individual or interest group will be addressed below.

6.4.3.1 William Davis letter dated May 4, 2002

Comment: Sand dunes should be created on the beaches from Hillsboro Inlet south to the geographical limit of the project.

Response: Refer to Section 6.4.2.2.

6.4.3.2 Lighthouse Point Saltwater Sportsman Association letter dated May 8, 2002

Comment: The proposed project does not include a mechanism to address sand bypassing at Port Everglades.

Response: Refer to Section 6.4.1.3.

Comment: There is no vegetation component included in the project.

Response: Refer to Section 6.4.2.2.

Comment: A dredge movement strategy is not included in the DEIS to minimize prolonged turbidity affects.

Response: Refer to Section 6.4.1.1.

6.4.3.3 ReefKeeper International letter dated May 16, 2002

Comment: The revised buffer zones range from 200 to more than 400 feet, however they remain inadequate to effectively ensure the protection of neighboring reefs.

Response: Refer to Section 6.4.1.2.

Comment: The borrow areas should be redesigned to minimize the number of turns and corners required. The areas should be easily marked squares and rectangles to minimize the potential for dredging to occur outside of the borrow areas.

Response: Refer to Section 6.4.1.2.

Comment: Dredging activities for this project should be limited to daytime operations only. The risks of the dredge straying off course and impacting hardbottom are too great to allow nighttime dredging to occur. Reef protection zones should be required so that reefs and hardbottom habitats are further protected from non-dredging activities such as construction vessel movement, anchoring, and spudding.

Response: In an effort to construct the project in a reasonable and cost effective manner, dredge operations must be conducted around the clock. Limitation of dredging activity to daylight only hours would effectively double the amount of time required to construct the project and result in a tremendous increase in project cost. The selected dredge contractor will be required by the project specifications to monitor the dredge position on a frequent basis and provide detailed records to the USACE and Broward County. Furthermore, Broward County has developed a

series of dredge operation zones around the borrow and transfer station sites within which the contractor will be permitted to navigate. Areas of significant marine resources are defined as exclusion zones and no anchoring, spudding, or deep draft vessel traffic will be allowed within these areas.

Comment: The applicant should be required to provide specific drawings and details of the pipeline placement, including an evaluation of the potential adverse impacts by the pipeline. Quantification and quality evaluation of any hardbottom habitat that would be covered must be included. If at all physically possible, damage must be avoided by routing the pipeline around corals – or by using sand from a different source.

Response: Refer to Section 6.4.1.3.

Comment: The proposed area of nearshore hardbottom that will be covered by the renourishment project be minimized.

Response: The EIS describes the steps undertaken to avoid and minimize impacts to sensitive marine habitats to the greatest extent practicable. Refer to Section 6.4.1.2.

Comment: A complete EFH assessment and consultation with the National Marine Fisheries Service and South Atlantic Fishery Management Council should be conducted prior to permitting.

Response: Refer to Section 6.4.1.2.

Comment: The area of beach between Monument R-52 and Monument R-69 should be excluded from the project.

Response: The EIS and General Reevaluation Report provide the basis for the incorporation of the noted section in the Segment II portion of the authorized Federal project.

Comment: The DEIS currently lists sand bypassing at Port Everglades as a recommendation. ReefKeeper International requests that it be a required component of the Final EIS and project permit.

Response: Refer to Section 6.4.1.3.

Comment: The applicant should be required to develop a more adequate mitigation plan before any approval of the project is granted. These mitigation plans should include a study of the feasibility of moving corals away from the shoreline, borrow areas and buffer zones.

Response: Refer to Section 6.4.1.2.

Comment: As a permit requirement, the EIS should fully explore the cumulative impacts to nearshore hardbottom and other Essential Fish habitat of the proposed project and its planned future renourishments.

Response: Refer to Section 6.4.1.2.

6.4.3.4 Cry of the Water letter dated May 17, 2002

Comment: Proper independent surveys should be done by the USACE, U. S. Fish & Wildlife Service, EPA, Florida Wildlife Conservation Commission, and the FDEP.

Response: The Federal and state agencies identified have conducted evaluations and site investigations of the proposed project areas and adjacent marine resources during their review of the project and EIS.

Comment: Work done in Segment III should have proper monitoring established to ensure that there are no impacts to surviving coral reefs.

Response: In a letter dated December 20, 2002, Broward County commits to expanding the environmental monitoring program to include additional coral health observations, additional monitoring station establishment, and sediment collection devices in the nearshore zone.

Comment: Adequate daily monitoring and proper buffer zones be established around the borrow sites and weekly monitoring be conducted on adjacent reefs.

Response: Refer to Section 6.4.1.1.

Comment: Sand bypassing must be implemented at Port Everglades as part of the project.

Response: Refer to Section 6.4.1.3. In their letter dated December 20, 2002, Broward County states that they will provide monthly updates on the progress of the Port Everglades Sand Bypassing Project to the organization.

Comment: Dunes and vegetation must be established where fill is added to help sustain these beaches.

Response: Refer to Section 6.4.2.2.

6.4.3.5 Public Employees for Environmental Responsibility letter dated May 20, 2002

Comment: The EIS must specifically address the impact of federal action proposed on Habitat Areas of Particular Concern (HAPC).

Response: Refer to Section 6.4.1.1.

Comment: Impacts to hardbottom from pipelines used to transfer sand from the pump-out stations to the fill sites should be addressed.

Response: Refer to Section 6.4.1.1.

Comment: Cumulative impacts to nearshore hardbottom from past projects and the effects of the current project should be analyzed in the EIS.

Response: Refer to Section 6.4.1.1.

Comment: Project related sedimentation and turbidity impacts should be evaluated.

Response: Refer to Section 6.4.1.1.

Comment: The material suitability of the mitigation (limestone boulders) should be evaluated based on the uniqueness of the effected ecosystem.

Response: The project has undergone extensive modifications to avoid and minimize impacts to hardbottom resources. Mitigation is proposed for impacts to 10.1 acres of low relief, nearshore hardbottom that can not be avoided during project construction and equilibration. Federal and state resource protection agency personnel have determined that the mitigative artificial reef proposal provides sufficient replacement habitat for the resources being impacted and they support the timing, design, materials, and location as proposed in the mitigation plan. A copy of the mitigation plan is included in the EIS appendices.

6.4.3.6 Save our Shoreline, Inc. memorandum dated May 20, 2002

Comment: Project construction should occur outside the sea turtle nesting season.

Response: The timing of project construction has been reviewed and accepted by those Federal and state agencies that have regulatory authority for sea turtle protection. Broward County is committed to protecting nesting sea turtles, their nests, and hatchlings. A program will be implemented to identify nests within the project area and relocate only those that are in jeopardy of disturbance or loss by either natural forces or construction activities.

Comment: The project permit should include a condition that a sea turtle lighting program be adopted by all upland properties and fully implemented within one year of project completion.

Response: Five municipalities within Broward County have adopted sea turtle lighting ordinances; Deerfield Beach, Pompano Beach, Lauderdale-by-the-Sea, Ft. Lauderdale and Hallandale. Conditioning the Federal and state authorizations for the project on the actions of local municipalities is not feasible. Broward County will continue to coordinate with the local municipalities to address sea turtle lighting issues in an effort to reduce or eliminate lighting impacts to nesting females and hatchlings.

Comment: Require the removal of all drainage (outfall) pipes before project construction.

Response: Removal of the drainage outfalls is not a component of the authorized Federal project. Broward County does not have jurisdiction over these structures and has notified the individual owners that their outfalls may not be in compliance with local and/or state regulations. Furthermore, the local municipalities and state agency responsible for compliance and enforcement activities related to outfalls discharging stormwater directly to the beach have been notified by Broward County that these structures are located within the project area.

Comment: A complete analysis of the total economic impact should be included in the EIS.

Response: The Policy White Paper on Socioeconomic Study of Reefs in Southeast Florida (Bell & Leeworthy, 2003) is complete and the findings of the study have been included in the FEIS. Refer to Section 6.4.1.2.

Comment: Rezone beach areas as a condition of the project.

Response: Local land use issues such as rezoning are not within the jurisdiction of the USACE who is the designated lead agency on the

authorized Federal project, or the Federal or state regulators responsible for reviewing and permitting project construction.

6.5 CIRCULATION OF FINAL EIS

A Notice of Availability of the Final Environmental Impact Statement (FEIS) will be published in the *Federal Register* and copies of the FEIS will be sent to those who received a copy of the DEIS and to those who submitted comments on the DEIS. Digital copies will also be available on CD-ROM in an Adobe Acrobat format. The FEIS will be published on the Broward County website at <http://www.broward.org> and the U.S. Army Corps of Engineers website under "Broward County Shore Protection Project" at <http://www.saj.usace.army.mil/pd/envdocs/>.

Publication of the FEIS in the *Federal Register* opens a 30-day comment period. Comments should be submitted to Ms. Terri Jordan, CESAJ-PD-ER, Jacksonville District Corps of Engineers, 701 San Marco Blvd., Jacksonville, FL 32207-8175.

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